

20020116.qrp v02_n437.qrl.20020116

Date: Wed, 16 Jan 2002 19:03:08 EST
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2437

QRP-L Digest 2437

Topics covered in this issue include:

- 1) [117664] Fox: announcement for January 17, 9:00pm est.
by "Doyle, Ronald D" <RD130947@exchange.DAYTONOH.NCR.com>
- 2) [117665] Re: CUB FOX HUNT - NUMBER 12 (Preliminary Log)
by "Doug Hendricks" <ki6ds@dph.dpol.net>
- 3) [117666] Nd magnet source?
by "Bruce Prior" <n7rr@hotmail.com>
- 4) [117667] Re: Was: ADE mixers, Now: driving mixers
by Bill Coleman <aa4lr@arrl.net>
- 5) [117668] UPDATE: SMT practice kit
by Steven Weber <kd1jv@moose.ncia.net>
- 6) [117669] Re: Was: ADE mixers, Now: driving mixers
by Jake Brodsky <frussle@erols.com>
- 7) [117670] Old Computer Parts--Free
by "Mark E. Smith" <flyer@value.net>
- 8) [117671] Re: Nd magnet source?
by David Hinerman <WD8CIV@worldnet.att.net>
- 9) [117672] Re: Was: ADE mixers, Now: driving mixers
by Roger Traylor <traylor@ece.orst.edu>
- 10) [117673] Re: [QRPP-I] Elmer 001
by "Lee Mairs" <lmairs@cox.rr.com>
- 11) [117674] Re: Was: ADE mixers, Now: driving mixers
by Jake Brodsky <frussle@erols.com>
- 12) [117675] Re: Was: ADE mixers, Now: driving mixers
by "Leon Heller" <leon_heller@hotmail.com>
- 13) [117676] Re: CUB FOX HUNT - NUMBER 12 (Preliminary Log)
by "Karl F. Larsen" <k5di@zianet.com>
- 14) [117677] Re: QRP Mobile w/Hamsticks
by George Franklin <w0av@juno.com>
- 15) [117678] Re: Nd magnet source?
by "E. Roswell" <eroswell@monmouth.com>

Date: Wed, 16 Jan 2002 13:31:01 -0500
From: "Doyle, Ronald D" <RD130947@exchange.DAYTONOH.NCR.com>
To: qrp-l@Lehigh.EDU
Cc: Steve_Galchutt <n0tu@mail.codenet.net>, n8var@arrl.net

Subject: [117664] Fox: announcement for January 17, 9:00pm est.
Message-ID: <0D6CE218BF54D211B37F00E0292657F40B37D08A@susdayte03.daytonoh.ncr.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"

OK guys, Hopefully this gets out before the digest so all who read can know.

Steve, N0TU, and I, Ron, N8VAR, will be the foxii Thursday eve starting at 9:00est (02:00z). Steve will hover around 7.041 listening up to 1khz above his calling freq. and I will be around 7.043 listening up to about 1khz above my calling freq.

We will call the usuall CQ CQ FOX DE N8VAR N8VAR K or CQ CQ FOX DE N0TU N0TU K.

And answer your call with 'call' 559 559 OH RON 5W 'call' K or 'call' 559 559 OH STEVE 5W 'call' K

and end the QSO with a TU or TU QRZ FOX DE N8VAR or N0TU K. Please listen so we have time to identify as we should.

Most likely we will NOT be listening on our xmit freq. Find the pack then find us and you will have your listening freq and sending freq. There are a lot of theories and methods to find our sweet spot were we can pick your special call out of the pack. Use them and have fun:)

Good luck to all es happy hunting!!!

72 de Ron, N8VAR
72 de Steve, N0TU

Date: Wed, 16 Jan 2002 10:40:00 -0800
From: "Doug Hendricks" <ki6ds@dph.dpol.net>
To: <qrp-1@Lehigh.EDU>
Subject: [117665] Re: CUB FOX HUNT - NUMBER 12 (Preliminary Log)
Message-ID: <016601c19ebd\$37058240\$4a0b0d0a@dph.dpol.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Brice, you worked 35 qso's and 17 states as a fox in the Novice band with "My SW-40+ held up fine at 3W and my Hamstick on a tripod remained pointing up throughout."!!!! Man alive, if you told me before you started that you

were going to work that many stations with that antenna, I would have given you some pretty good odds that you couldn't do it. A hamstick on a tripod???? I had trouble working more than 1 or 2 stations when I used mine. Vern calls them a "dummy load-on-stick" and I believe him. Guess it goes to show that "all antennas work". Great job. 72, Doug

Date: Wed, 16 Jan 2002 19:34:05
From: "Bruce Prior" <n7rr@hotmail.com>
To: qrp-l@Lehigh.EDU
Subject: [117666] Nd magnet source?
Message-ID: <F10174hfFfvEVV3U90N000095aa@hotmail.com>
Mime-Version: 1.0
Content-Type: text/html

<html><div style='background-color:'><DIV>Gang --</DIV>
<DIV>A middle school science teacher friend is looking for a cheap source of Nd magnets for her students to use to construct audio speakers. Any ideas? Thanks and 72,</DIV>
<DIV>Bruce Prior N7RR in Blaine, WA</DIV>
<DIV>P.S. I'm trying to recruit her into amateur radio to participate with her students in the ARRL's "The Big Project."</DIV></div><br clear=all><hr>Send and receive Hotmail on your mobile device: Click Here
</html>

Date: Wed, 16 Jan 2002 15:00:19 -0500
From: Bill Coleman <aa4lr@arrl.net>
To: <frussle@erols.com>,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [117667] Re: Was: ADE mixers, Now: driving mixers
Message-ID: <1020016145848.0AA01401@gate.iterated.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 1/14/02 10:49 AM, Jake Brodsky at frussle@erols.com wrote:

>Given a square wave with a clean 50%
>duty cycle and a source impedance of 50 ohms, I can't imagine why it
>would be worse than a plain sine wave L0 drive.

Do you have trouble imagining odd harmonics?

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net
Quote: "Not within a thousand years will man ever fly!"
 -- Wilbur Wright, 1901

Date: Wed, 16 Jan 2002 15:20:40 -0500
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-l@lehigh.edu
Subject: [117668] UPDATE: SMT practice kit
Message-ID: <3.0.6.32.20020116152040.007a89c0@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

The boards and most of the parts for the 555 timer keyer, ala, the "SMT practice kit" came in today. The boards sure are cute little buggers :-)
Should have the ballance of the parts by Monday at the latest, so can start sending these out soon. Guess I need to get busy on the instructions, eh?

Still got about 20 of the kits left, if anyone else wants to get thier feet wet with SMT parts, it's only \$15.00..

72,
Steve, KD1JV
"Melt Solder"
White Mountians of New Hampshire
<http://www.qsl.net/kd1jv/>

Date: Wed, 16 Jan 2002 15:21:20 -0500
From: Jake Brodsky <frussle@erols.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [117669] Re: Was: ADE mixers, Now: driving mixers
Message-ID: <avnb4u8t99k1emjb37p99istug8dpd564d@4ax.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: quoted-printable

On Wed, 16 Jan 2002 15:00:19 -0500, Bill Coleman, AA4LR wrote:

>On 1/14/02 10:49 AM, Jake Brodsky at frussle@erols.com wrote:
>
>>Given a square wave with a clean 50%
>>duty cycle and a source impedance of 50 ohms, I can't imagine why it
>>would be worse than a plain sine wave LO drive.

>

>Do you have trouble imagining odd harmonics?

No. Do you have trouble understanding diode switching?

In all seriousness, consider that a normal mixer has these products anyway. The whole point of a high level sine wave driven mixer is to drive these diodes in to saturation so that they can switch. That being the case, why would a sine wave be any better than a square wave? =20

Jake Brodsky, <mailto:frussle@erols.com>

"Nearly fifty percent of all graduates came from=20
the bottom half of the class."

Date: Wed, 16 Jan 2002 12:24:06 +0000

From: "Mark E. Smith" <flyer@value.net>

To: psk31@bipt106.bi.ehu.es, qrp-1@lehigh.edu

Subject: [117670] Old Computer Parts--Free

Message-ID: <200201162028.g0GKSWt31864@mail.value.net>

Anyone out there still trying to upgrade an old 486SX computer?

I have a good 486DX40DP100 CPU that will replace a 20, 25, or 33MHz 486SX CPU and turn it into a 100MHz CPU with Math Coprocessor. It did wonders for my old machine, and worked very well for PSK31 with Windows 95 and Digipan.

I also have 3 memory cards for old machines like that. I have no idea what their part numbers might be. One of them is 4 megabytes and the other 2 are 8 megabytes. The cards are 72 pin and they are about 4 1/4 inches wide and 1 inch high. I believe they were called SIMMs, at least that is what Compaq called them.

Anyway, the old hard drive failed, so I have junked the computer and pulled these things out of it because I thought someone might be able to use them. For the cost of shipping them, they are available.

Please respond off-list.

Mark Smith W7MTP Pleasanton, CA

Date: Wed, 16 Jan 2002 15:35:40 -0500
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-1@lehigh.edu
Subject: [117671] Re: Nd magnet source?
Message-ID: <5.1.0.14.1.20020116153110.00a73710@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 07:34 PM 1/16/2002 +0000, you wrote:

>Gang --
>A middle school science teacher friend is looking for a cheap source of Nd
>magnets for her students to use to construct audio speakers. Any
>ideas? Thanks and 72,
>Bruce Prior N7RR in Blaine, WA
>P.S. I'm trying to recruit her into amateur radio to participate with her
>students in the ARRL's "The Big Project."

Bruce,

A good source of some dandy magnets is old hard disk drives. The head positioners use some really powerful magnets. I think they're Nd. They tend to be oddly shaped - the guy in the cubicle next to mine has some that look like 1.5 inch long brake pads - but they work.

A fun demonstration is to take a long aluminum heat sink, the kind with fins, and hold it upright so the fins make a trough pointing toward the ground. Drop one of the magnets (or two if they'll fit, stuck together) into the top of the trough. They'll slowly slide down the trough, as if through oil.

The magnetic fields induces an opposing field in the aluminum, causing it to resist the motion of the magnet.

Anyway, if shape isn't a factor try ripping into some old hard disks.

Dave

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Wed, 16 Jan 2002 12:53:38 -0800
From: Roger Traylor <traylor@ece.orst.edu>
To: Jake Brodsky <frussle@erols.com>

Cc: qrp-1@lehigh.edu
Subject: [117672] Re: Was: ADE mixers, Now: driving mixers
Message-ID: <20020116125338.K26103@brilthor.ECE.ORST.EDU>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Jake,

The problem as I recall is that you get ringing on the LO waveform when the ports are not properly terminated. The ringing frequency is not necessarily related to any of the signals at any port. Thus products generated from the ringing can land just where you don't want them. The ringing issue was another reason why close proximity of drivers and mixer is good. Having them close seems to minimize the ringing.

Roger Traylor
WB4TPW

On Mon, Jan 14, 2002 at 10:49:17AM -0500, Jake Brodsky wrote:

> On Fri, 11 Jan 2002 09:10:32 -0800, Roger Traylor, WB4TPW wrote:
>
> > This brings up another point. If other ports to the mixer aren't
> > terminated well, it makes finding a resonable match to the LO port
> > difficult.
>
> AMEN! I've thought long and hard and I keep wondering if this is yet
> another urban legend, or what. Given a square wave with a clean 50%
> duty cycle and a source impedance of 50 ohms, I can't imagine why it
> would be worse than a plain sine wave LO drive.
>
> I have noticed some misleading things written up on VFO design that
> give me pause for thought, however. I've read that a VFO should try
> to have a pure sine wave output. Along those same lines is the
> business of how to minimize VHF parasitics. It seems to me that a
> square wave output from a VFO buffer would be a bad thing because it
> would present an uneven load to the oscillating device --which could
> lead to parasitics.
>
> However, the square wave issue is all about VFO design, not square
> waves presented to mixers. I'm gathering parts for building several
> versions of Linley Gumm's bipolar differential oscillator circuits.
> It's worth noting that unlike classic JFET VFO designs, this one is
> designed to operate at saturation. It produces a square wave output.
>
> I'll let y'all know how it goes...
>

>
> Jake Brodsky, <mailto:frussle@erols.com>
> "Nearly fifty percent of all graduates came from
> the bottom half of the class."

Date: Wed, 16 Jan 2002 15:59:09 -0500
From: "Lee Mairs" <lmairs@cox.rr.com>
To: "Brice D. Hornback" <bdh@cyberbound.net>, <QRPP-I@yahoogroups.com>,
"qrpl" <qrp-l@lehigh.edu>
Subject: [117673] Re: [QRPP-I] Elmer 001
Message-ID: <[00ba01c19ed0\\$a51fdec0\\$6501a8c0@cox.rr.com](mailto:00ba01c19ed0$a51fdec0$6501a8c0@cox.rr.com)>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

As anybody had problems with the insulation chipping off on the Radio Shack assortment? I've noted this quite a bit especially on the #26 wire. Maybe I'm doing something wrong when I wind my toroids. Any suggestions?

73 de Lee

km4yy

The painful warrior famoused for fight,
After a thousand victories, once foil'd,
Is from the books of honour razed quite,
And all the rest forgot for which he toil'd.

--Shakespeare, Sonnet xxv.

----- Original Message -----

From: "Brice D. Hornback" <bdh@cyberbound.net>
To: <QRPP-I@yahoogroups.com>
Sent: Wednesday, January 16, 2002 3:05 PM
Subject: Re: [QRPP-I] Elmer 001

> Radio Shack sells a nice set of three different sizes.
>
> Magnet Wire Set
> \$3.99 Brand: RadioShack
> Cat.#: 278-1345 Model: 278-1345
> Three-spool assortment totaling 315 feet at a value price. This
> enamel-covered solid-conductor copper wire is perfect for winding your own
> coils and electromagnets. Includes 40 feet of 22-gauge, 75 feet of
> 26-gauge
> and 200 feet of 30-gauge. Priced three to a package.

>
> The wire size doesn't matter so much as how many turns you can wind on a
> toroid core. The larger diameter the wire, the fewer the turns you can
fit.
> I'm sure there are other differences but for our purposes, use the green
> 26-guage for the output filter toroid. You can use the red 30-gauge as
> well... but I think it's easier to work with the 26-guage wire as it
doesn't
> break quite as easily when you pull on it to keep it wound tightly around
> the core. Also, you could use the red to wind the toroid and use the
green
> to build a 40 meter dipole (or the other way around as well). Talk about
> stealthy!
>
> Don't worry too much about the wire diameter as long as you can fit the
> correct number of turns on the toroid core. Would anyone like to expand
on
> "Why or Why Not" the wire diameter makes a difference when winding a
toroid?
>
> 73/72/71! de Brice KA8MAV
>
> ----- Original Message -----
> From: "butterchurn2002" <rkjewett@mediaone.net>
> To: <QRPP-I@yahoogroups.com>
> Sent: Wednesday, January 16, 2002 2:21 PM
> Subject: [QRPP-I] Elmer 001
>
>
> > What size magnet wire should I purchase to wind the T37-6 Toroid?
> >
> > Ron KE8MJ
> >
> >
> >
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> >
> > Check out what's new at the
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>

Date: Wed, 16 Jan 2002 16:04:46 -0500
From: Jake Brodsky <frussle@erols.com>
To: qrp-l@lehigh.edu
Subject: [117674] Re: Was: ADE mixers, Now: driving mixers
Message-ID: <shqb4ug67l145apkhmv65gnbt5fvo0k4me@4ax.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: quoted-printable

On Wed, 16 Jan 2002 12:53:38 -0800, you wrote:

> The problem as I recall is that you get ringing on the
> L0 waveform when the ports are not properly terminated. The=20
> ringing frequency is not necessarily related to any of the=20
> signals at any port. Thus products generated from the ringing can=20
> land just where you don't want them. The ringing issue was
> another reason why close proximity of drivers and mixer=20
> is good. Having them close seems to minimize the ringing.

I understand what happens if a port is poorly terminated; but why
would a square wave be any more subject to this than a sine wave?
Recall that the point was to drive these diodes in to conduction
anyway. =20

Wouldn't a poorly terminated sine wave be just as bad?
=20

Jake Brodsky, <mailto:frussle@erols.com>
"Nearly fifty percent of all graduates came from=20
the bottom half of the class."

Date: Wed, 16 Jan 2002 21:27:10 +0000
From: "Leon Heller" <leon_heller@hotmail.com>
To: aa4lr@arrl.net, qrp-1@Lehigh.EDU
Subject: [117675] Re: Was: ADE mixers, Now: driving mixers
Message-ID: <F226pTBySVTcviBQH5b00025d3c@hotmail.com>
Mime-Version: 1.0
Content-Type: text/plain; format=flowed

>From: Bill Coleman <aa4lr@arrl.net>
>Reply-To: aa4lr@arrl.net
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
>Subject: Re: Was: ADE mixers, Now: driving mixers
>Date: Wed, 16 Jan 2002 15:00:19 -0500
>
>On 1/14/02 10:49 AM, Jake Brodsky at frussle@erols.com wrote:
>
> >Given a square wave with a clean 50%
> >duty cycle and a source impedance of 50 ohms, I can't imagine why it
> >would be worse than a plain sine wave LO drive.
>
>Do you have trouble imagining odd harmonics?

If you put a scope on the input to a diode mixer driven by a sine wave it looks like a square wave. You might as well start off with one and get faster switching.

BTW, all really high performance mixers in use currently use square wave oscillator input, because they depend upon switching action.

Harmonics don't really matter, with an up-converting front-end, because of the input filter.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1327 359058 Email:leon_heller@hotmail.com

My web page: http://www.geocities.com/leon_heller
My low-cost Altera Flex design kit: <http://www.leonheller.com>

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

Date: Wed, 16 Jan 2002 15:46:33 -0700 (MST)
From: "Karl F. Larsen" <k5di@zianet.com>
To: Doug Hendricks <ki6ds@dph.dpol.net>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [117676] Re: CUB FOX HUNT - NUMBER 12 (Preliminary Log)
Message-ID: <Pine.LNX.4.33.0201161536150.3453-100000@Daisy.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Guys I made measurements of the hamstick on 40 and 20 meters last year. I found the 40 meter version properly tuned to frequency is almost exactly 10 DB weaker than a 40 meter dipole at 20 feet. This was over distances of 300 to 1000 miles.

The 20 meter version I was sure would be better, but compared to the w3ff short (16 feet) dipole the dipole was 20 DB better than the hamstick!

So if you can run 100 watts to a hamstick in your car you will get out pretty well. But for QRP work they do resemble a dummy load. For the upcoming FYBO contest I expect to be wrapped up in winter clothing with a w3ff antenna, 10 foot mast, card table and chair, keypaddle and battery and FT-817, clipboard and paper. Hope 20 and 15 are open!

On Wed, 16 Jan 2002, Doug Hendricks wrote:

> Brice, you worked 35 qso's and 17 states as a fox in the Novice band with
> "My SW-40+ held up fine at 3W and my Hamstick on a tripod remained pointing
> up throughout."!!!! Man alive, if you told me before you started that you
> were going to work that many stations with that antenna, I would have given
> you some pretty good odds that you couldn't do it. A hamstick on a
> tripod???? I had trouble working more than 1 or 2 stations when I used
> mine. Vern calls them a "dummy load-on-stick" and I believe him. Guess
> it goes to show that "all antennas work". Great job. 72, Doug
>
>

--

Yours Truly,

- Karl F. Larsen, k5di@arrl.net (505) 524-3303 -
<http://www.zianet.com/k5di/>

Date: Wed, 16 Jan 2002 16:59:22 -0600
From: George Franklin <w0av@juno.com>
To: k5di@zianet.com
Cc: qrp-1@Lehigh.EDU
Subject: [117677] Re: QRP Mobile w/Hamsticks
Message-ID: <20020116.165923.-1494973.1.w0av@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi Karl and All,

I have used a 20M Hamstick at 5W in the mobile on several occasions,
including QRP contests, with good results.

Haven't tried much with the 40M Hamstick at 5W but have made a few
contacts.

FWIW and YMMV.

72 de George/W0AV
SOC#101, COG#1
Hamming since '35

Date: Wed, 16 Jan 2002 18:39:09 -0500
From: "E. Roswell" <eroswell@monmouth.com>
To: qrp-1@Lehigh.EDU
Subject: [117678] Re: Nd magnet source?
Message-ID: <3C460F1D.1FA40DFD@monmouth.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Grizzly has some small ones - 3/16" diam. 5-pack for \$5.95, Model No. H0833,
p.165 of 2002 catalog, just out, also
<http://www.grizzly.com>
ALL Electronics has some odd shaped ones, as well as ceramic magnets, p.25 of

their catalog;
<http://www.allelectronics.com>
73, Ed,
K2MGM.

End of QRP-L Digest 2437

